

Claims

1. Radio communications system with at least one base station (BS1, BS2) and with at least one wireless subscriber terminal (MT) which contains a transceiver in order to transmit and receive radio signals by at least two different radio transmission modes (DECT, GSM, UMTS, IS95), and which contains a selector in order to select one of the various radio transmission modes (DECT, GSM, UMTS) at least prior to a subscriber connection being established with one (BS1) of the, at least one, base stations (BS1, BS2), characterised in that the at least one base station (BS1) also contains a transceiver in order to transmit and receive by various radio transmission modes (DECT, GSM, EDGE), and in that the at least one base station (BS1) is connected to a control means (RRM) which determines an availability value for each of the various radio transmission modes (DECT, GSM, EDGE) with the aid of preselectable criteria and controls the base station (BS1) in order to transmit to the wireless subscriber terminal an identification code for at least the radio transmission mode (DECT) which has the highest availability value.

2. Radio communications system according to claim 1, characterised in that the preselectable criteria are the radio resources instantaneously available in the radio system, and in that by monitoring the radio resources available at each base station (BS1, BS2) connected to the control means (RRM), the latter assign the radio transmission mode (DECT) which instantaneously has the most radio resources the highest availability value.

3. Radio communications system according to claim 1, characterised in that the various radio transmission modes comprise standardised methods of radio transmission (DECT, GSM, UMTS, IS95), in particular various versions of standardised methods of radio transmission, and in that the transceiver of the at least one base station and of the at least one wireless subscriber terminal (MT) can

transmit and receive radio signals in accordance with these standardised methods of radio transmission (DECT, GSM, UMTS, IS95).

4. Radio communications system according to claim 1, characterised in that the control means (RRM) creates a priority list for the base station (BS1) in which the identification codes for the radio transmission modes (DECT, GSM, EDGE) are listed in an order of precedence dependent on the size of their availability values, in that the base station (BS1) transmits this priority list to the wireless subscriber terminal (MT), and in that the wireless subscriber terminal (MT) receives the priority list and checks by means of the identification codes of the radio transmission modes (DECT, GSM, EDGE) listed there whether at least one of the identification codes gives a radio transmission mode (DECT) by which the transceiver of the subscriber terminal (MT) can transmit and receive radio signals.

5. Radio communications system according to claim 4, characterised in that in the event that at least two identification codes give radio transmission modes (DECT, GSM) by which the transceiver of the subscriber terminal (MT) can transmit and receive radio signals, the wireless subscriber terminal selects the radio transmission mode (DECT) which has the highest availability value.

6. Radio communications system according to claim 4, characterised in that the wireless subscriber terminal (MT) transmits to the base station (BS1) the identification codes for all the radio transmission modes (DECT, GSM, UMTS) by which the transceiver of the subscriber terminal (MT) can transmit and receive radio signals, and in that the control means (RRM) for the base station (BS1) then creates the priority list by means of the identification codes transmitted by the subscriber terminal (MT), only these identification codes being listed in the priority list in a order of precedence dependent on the size of their availability values.

7. Radio communications system according to claim 6, characterised in that the wireless subscriber terminal (MT) lists the identification codes for the radio transmission modes (DECT, GSM, UMTS) in accordance with a preselectable order of precedence to form a wish list and transmits this wish list to the base station (BS1),
 5 and in that the control means (RRM) for the base station (BS1) then creates the priority list by means of the transmitted wish list, the identification codes being listed in the priority list with the same availability values as those in their order of precedence within the wish list.

10 8. Radio communications system according to claim 7, characterised in that the wireless subscriber terminal (MT) contains input means by means of which the subscriber preselects the order of precedence of the radio transmission modes (DECT, GSM, UMTS) listed in the wish list.

15 9. Radio communications system according to claim 7, characterised in that the wireless subscriber terminal (MT) contains a computer which preselects the order of precedence of the radio transmission modes (DECT, GSM, UMTS) listed in the wish list by means of the telecommunications service desired by the subscriber.

20 ~~10.~~ Wireless subscriber terminal (MT) which contains a transceiver in order to transmit and receive, in a radio communications system which contains at least one base station (BS1, BS2), radio signals by at least two different radio transmission modes (DECT, GSM, UMTS, IS95), and which contains a selector in order to select one of the various radio transmission modes (DECT, GSM, UMTS) at least prior to a
 25 subscriber connection being established with one (BS1) of the, at least one, base stations (BS1, BS2), characterised in that the wireless subscriber terminal (MT) receives identification codes from the at least one base station (BS1), which also contains a transceiver, in order to transmit and receive by various radio transmission modes (DECT, GSM, EDGE), and which is connected to a control means (RRM) which
 30 determines an availability value for each of the various radio transmission modes

(DECT, GSM, EDGE) with the aid of preselectable criteria and controls the base station (BS1) in order to transmit to the wireless subscriber terminal (MT) the identification code at least for the radio transmission mode (DECT) which has the highest availability value.

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11. Base station (BS1) for a radio communications system with at least one wireless subscriber terminal (MT) which contains a transceiver, in order to transmit and receive radio signals by at least two different radio transmission modes (DECT, GSM, UMTS, IS95), and which contains a selector in order to select one of the various radio transmission modes (DECT, GSM, UMTS) at least prior to a subscriber connection being established with the base station (BS1), characterised in that the base station (BS1) also contains a transceiver in order to transmit and receive by various radio transmission modes (DECT, GSM, EDGE), and in that the base station (BS1) is connected to a control means (RRM) which determines an availability value for each of the various radio transmission modes (DECT, GSM, EDGE) with the aid of preselectable criteria in order to control the base station (BS1) so the base station (BS1) transmits to the wireless subscriber terminal (MT) an identification code at least for the radio transmission mode which has the highest availability value.

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12. Control means (RRM) for at least one base station (BS1, BS2) in a radio communications system with at least one wireless subscriber terminal (MT) which contains a transceiver in order to transmit and receive radio signals by at least two different radio transmission modes (DECT, GSM, UMTS, IS95) and which contains a selector in order to select one of the various radio transmission modes (DECT, GSM, UMTS, IS95) at least prior to a subscriber connection being established with one (BS1) of the, at least one, base stations (BS1, BS2), characterised in that the at least one base station (BS1) also contains a transceiver in order to transmit and receive by various radio transmission modes (DECT, GSM, EDGE), and in that the control means (RRM) determines an availability value for each of the various radio transmission modes (DECT, GSM, EDGE) with the aid of preselectable criteria and

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controls the base station (BS1) in order to transmit to the wireless subscriber terminal (MT) an identification code at least for the radio transmission mode (DECT) which has the highest availability value.

- 5 ~~13.~~ Method of radio transmission (100) in a radio communications system in which radio signals are transmitted and received by a wireless subscriber terminal (MT) by at least two different radio transmission modes (DECT, GSM, UMTS, IS95) and in which one of the various radio transmission modes (DECT, GSM, UMTS) is selected (140) by the subscriber terminal (MT) at least prior to a subscriber
- 10 connection being established (150) with a base station (BS1), characterised in that radio signals are also transmitted and received (155) by the base station (BS1) by various radio transmission modes (DECT, GSM, EDGE), and in that an availability value is determined (110) for each of the various radio transmission modes (DECT, GSM, EDGE) by a control means (RRM) connected to the base station (BS1) with the
- 15 aid of preselectable criteria and the base station (BS1) is controlled in order to transmit (130) to the wireless subscriber terminal (MT) an identification code at least for the radio transmission mode (DECT) which has the highest availability value.
14. Method of radio transmission (100) according to claim 13, characterised in
- 20 that a priority list is created (120) for the base station (BS1) in which the identification codes for the radio transmission modes (DECT, GSM, EDGE) are listed in an order or precedence dependent on the size of their availability values, in that this priority list is transmitted (130) by the base station (BS1) to the wireless subscriber terminal (MT), and in that the priority list is received (135) by the wireless subscriber terminal (MT)
- 25 and it is checked (140) by means of the identification codes of the radio transmission modes (DECT, GSM, EDGE) listed there whether at least one of the identification codes gives a radio transmission mode (DECT) by which the transceiver of the subscriber terminal (MT) can transmit and receive radio signals.

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